

**IN THE CLAIMS**

1           1. (Previously presented) A method for use in a communications endpoint, the  
2 method comprising the steps of:

3           determining a signature of a communications channel, wherein the signature of  
4 the communications channel is a second order statistic of a signal-to-noise ratio of a  
5 signal received from the communications channel;

6           performing power control over the communications channel wherein the power  
7 control compares a metric value and a target metric value, such that the target metric  
8 value is adjusted as a function of the determined signature of the communications  
9 channel.

1           2. (Original) The method of claim 1 wherein the metric is a bit error rate (BER).

1           3. (Canceled)

1           4. (Previously presented) The method of claim 1 wherein the determining step  
2 includes the steps of:

3           collecting signal-to-noise ratio (SNR) values of the signal received from the  
4 communications channel; and

5           calculating the second order statistic of the collected SNR values.

1           5. (Canceled)

1           6. (Original) The method of claim 1 wherein the communications endpoint is a  
2 wireless endpoint.

1           7. (Original) The method of claim 1 wherein the metric is a symbol error count.

1           8. (Previously presented) The method of claim 7 wherein the determining step  
2 includes the step of monitoring the symbol error count of the received signal for  
3 determining a standard deviation of the received symbol error count; and the performing  
4 step includes the step of adjusting a target symbol error count for the received signal as  
5 a function of the standard deviation for use in providing the power control.

1           9. (Previously presented) The method of claim 1 wherein the determining step  
2 includes the steps of:

3           monitoring a symbol error count of the received signal for determining a standard  
4 deviation of a received symbol error count;

5           setting a target symbol error rate as a function of the standard deviation; and

6           wherein the performing step includes the step of

7           adjusting a target signal-to-noise ratio for the received signal depending on the  
8 difference between the set target symbol error rate and the actual symbol error count  
9 produced by the receiver.

1           10. (Original) The method of claim 1 wherein the performing power control step  
2 performs symbol error count based reverse outer loop power control with adaptive  
3 symbol error rate targets.

1           11. (Previously presented) A method for use in a communications endpoint, the  
2 method comprising the steps of:

3           receiving a signal from a wireless endpoint;

4           developing a second order statistic from the received signal based on a signal-to-  
5 noise ratio of the received signal; and

6           performing power control with the wireless endpoint as a function of the second  
7 order statistic.

1           12. (Previously presented) The method of claim 11 wherein the developing step  
2 further comprises:

3           adjusting a bit error rate target value as a function of the second order  
4 statistic;

5           and the performing step includes the step of performing reverse-link outer loop  
6 power control as a function of a comparison between a bit error rate value of the  
7 received signal and the adjusted bit error rate target value.

1           13. (Original) The method of claim 11 wherein the communications endpoint is a  
2 wireless endpoint.

1           14. (Original) The method of claim 11 wherein the power control is a symbol error  
2 count based power control.

1           15. (Original) The method of claim 11 wherein the developing step includes the  
2 step of monitoring a symbol error count of the received signal for determining a  
3 standard deviation of the received symbol error count; and the performing step includes  
4 the step of adjusting a target symbol error count for the received signal as a function of  
5 the standard deviation for use in providing the power control.

1           16. (Original) The method of claim 11 wherein the developing step includes the  
2 steps of:

3           monitoring a symbol error count of the received signal for determining a standard  
4 deviation of the received symbol error count;

5           setting a target symbol error rate as a function of the standard deviation; and

6           the performing step includes the step of adjusting a target signal-to-noise ratio for  
7 the received signal depending on the difference between the set target symbol error  
8 rate and the actual symbol error count produced by the receiver.

1           17. (Previously presented) A method for use in a communications endpoint, the  
2 method comprising the steps of:

3           measuring a signature of a fading environment, wherein the measuring includes  
4 calculating a standard deviation value of a signal-to-noise ratio of a received signal; and

5           performing power control by adjusting a target metric value as a function of the  
6 measured signature.

1           18. (Canceled)

1           19. (Previously presented) The method of claim 17 wherein the performing step  
2 uses the standard deviation value of the signal-to-noise ratio to adjust the target metric  
3 value.

1           20. (Original) The method of claim 17 wherein the metric value is a bit error rate  
2 (BER).

1           21. (Previously presented) The method of claim 17 wherein the performing step  
2 adds a value to a signal-to-noise ratio target value, wherein the added value is selected  
3 as a function of the measured signature of the fading environment.

1           22. (Original) The method of claim 17 wherein the performing step includes the  
2 steps of:

3           estimating a bit error rate (BER);  
4           comparing the estimated BER to a target BER value; and  
5           adjusting a target signal-to-noise ratio value as a result of the comparison by  
6 adding a value to the target signal-to-noise ratio;

7           wherein the value added to the target signal-to-noise-ratio is selected as a  
8 function of the measured signature.

1           23. (Original) The method of claim 17 wherein the communications endpoint is a  
2 wireless endpoint.

1           24. (Previously presented) An apparatus for use in a communication endpoint,  
2 the apparatus comprising:

3           a receiver for receiving a signal;  
4           a controller for (a) developing a signature of a communications channel from the  
5 received signal, wherein the controller further determines the signature of the  
6 communications channel by collecting signal-to-noise ratio values of the received signal  
7 and by calculating a second order statistic of the collected signal-to-noise ratio values;  
8 and (b) performing power control over the communications channel by adjusting a target  
9 metric value as a function of the signature of the communications channel.

1           25. (Original) The apparatus of claim 24 further comprising a decoder for  
2 decoding the received signal and wherein the metric is a bit error rate (BER) of the  
3 decoded received signal.

1           26. (Canceled)

1           27. (Canceled)

1        28. (Previously presented) The apparatus of claim 24 further comprising a  
2 memory for storing a look-up table which maps values of the second order statistic to  
3 adjustment values for use in adjusting the target metric value.

1        29. (Original) The apparatus of claim 24 wherein the metric value is signal-to-  
2 noise (SNR).

1        30. (Original) The apparatus of claim 24 wherein the target metric value is a  
2 target signal-to-noise ratio (SNR) and the controller adjusts the SNR target value by  
3 adding a value to the SNR target value, wherein the added value is selected as a  
4 function of the developed signature.

1        31. (Original) The apparatus of claim 24 wherein the communications endpoint is  
2 a wireless endpoint.

1        32. (Original) The apparatus of claim 24 wherein the metric is a symbol error  
2 count.

1        33. (Original) The apparatus of claim 24 wherein the controller monitors a  
2 symbol error count of the received signal for determining a standard deviation of the  
3 received symbol error count; and adjusts a target symbol error count for the received  
4 signal as a function of the standard deviation for use in providing the power control.

1        34. (Original) An apparatus for use in a communications endpoint, the apparatus  
2 comprising:

3        a decoder for decoding a frame of a received signal and for providing a signal  
4 representative of log-likelihood ratios with respect to information bits of the decoded  
5 frame;

6        a bit error estimate generator responsive to the signal representative of the log-  
7 likelihood ratios for providing a bit error rate estimate; and

8        a processor for performing reverse outer loop power control (ROLPC) over a  
9 communications channel wherein the ROLPC performs a comparison between the bit  
10 error rate estimate and a target bit error rate value such that the target bit error rate

11 value is adjusted as a function of a signature of the communications channel.

1 35. (Original) The apparatus of claim 34 wherein the processor further  
2 determines the signature of the communications channel by calculating a second order  
3 statistic of a received signal-to-noise ratio (SNR).

1 36. (Original) The apparatus of claim 35 further comprising a memory for storing  
2 a look-up table which maps values of the second order statistic to adjustment values for  
3 use in adjusting the target bit error rate value.

1 37. (Original) The apparatus of claim 34 wherein the communications endpoint is  
2 a wireless endpoint.

1 38. (Previously presented) Apparatus for use in equipment for providing power  
2 control in a cellular system, the apparatus comprising:

3 a receiver for receiving a signal from a wireless endpoint;

4 a controller for (a) developing a second order statistic from the received signal,  
5 wherein the controller calculates the second order statistic of collected signal-to-noise  
6 ratio values of the received signal, and wherein said second order statistic is used to  
7 determine an adjustment to a target metric value; and (b) performing power control with  
8 the wireless endpoint as a function of the second order statistic.

1 39. (Canceled)

1 40. (Previously presented) The apparatus of claim 38 wherein the metric value is  
2 a bit error rate (BER).

1 41. (Original) The apparatus of claim 38 wherein the power control is a symbol  
2 error count based power control.

1 42. (Original) The apparatus of claim 38 wherein the controller monitors a  
2 symbol error count of the received signal for determining a standard deviation of the  
3 received symbol error count; and adjusts a target symbol error count for the received  
4 signal as a function of the standard deviation for use in providing the power control.

- 1           43. (Previously presented) The apparatus of claim 38 further comprising a
- 2   transmitter for transmitting power control information to a mobile station.